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SMB/5906/SBP

2016-05-27

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### STANDARDIZATION MANAGEMENT BOARD

#### SUBJECT

**SMB Meeting 157, Frankfurt**

Updated Strategic Business Plan of IEC TC 97, *Electrical installations for lighting and beaconing of aerodromes*.

#### BACKGROUND

Subsequent to its 2016 plenary meeting, TC 97 has updated its Strategic Business Plan which is attached and submitted to the SMB for approval.

#### ACTION

The SMB is invited to comment on this document in order to approve the SBP.  
Comments should be submitted, using the technical server **before 2016-06-24**.



## STRATEGIC BUSINESS PLAN (SBP)

IEC/TC OR SC:	SECRETARIAT:	DATE:
<b>97</b>	<b>SPAIN</b>	<b>2016-04</b>

Please ensure this form is annexed to the Report to the Standardization Management Board if it has been prepared during a meeting, or sent to the Central Office promptly after its contents have been agreed by the committee.

### A. STATE TITLE AND SCOPE OF TC

TC 97 - Electrical installations for lighting and beaconing of aerodromes.

To prepare international standards for design, installation, verification and maintenance of aeronautical ground lighting of aerodromes.

The activity covers requirements which apply to the whole system from the incoming power to the aerodrome up to and including the luminaires used in aeronautical ground lighting.

The activity will not cover:

- electrical installations already standardized by TC 64;
- luminaires not used as aeronautical ground lights standardized by TC 34;
- special cables for the constant current series circuit standardized by TC 20.

Note - Operational requirements for aeronautical ground lights are specified in Annex 14 to the Convention on International Civil Aviation.

### B. MANAGEMENT STRUCTURE OF THE TC

This TC has been traditionally structured into Project Teams according to the relevant approved NWIP.

### **C. BUSINESS ENVIRONMENT**

Although various forms of ownership may exist, aerodromes are commonly considered as belonging to the public sector. Civil Aviation Authorities are the regulatory bodies.

Standards and Recommended Practices (SARPs) applicable to the design and operation of aerodromes are published in Annex 14 to the Convention on International Civil Aviation (Chicago 1944). SARPs are adopted by the Council of ICAO pursuant to Article 37 of the Convention.

SARPs are specifications, which are recognized as necessary or desirable in the interest of safety, regularity or efficiency of international air navigation. Signatories to the Convention have an obligation to conform to the SARPs as far as practicable. SARPs are addressing operational and performance requirements but do not include technical requirements on electrical systems.

Aeronautical Ground Lighting systems are characterized by several light units spread out over a relatively large area. In most cases system design is achieved by the use of current controlled circuits (series system) instead of installations covered by standards prepared by TC 64. Existing standards for series circuit products are industry (de facto) standards and a few national standards. A widely used set of standards covering series circuits is that published within the family of Advisory Circulars by the Federal Aviation Administration of the USA (FAA).

TC 97 is doing a pioneering work by preparing International Standards for power distribution systems adapted to the operational and safety needs of AGL.

### **D. MARKET DEMAND**

Anticipated users of the standards prepared by TC 97 are electrical engineers involved in systems design, procurement of equipment and construction of Aeronautical Ground Lighting systems, and the industry supplying equipment for such systems. Testing and certification institutions are also expected users of the standards. In addition, TC 97 is expecting that standards on installation and maintenance of the constant current series circuits will be used by the regulatory bodies as reference material. As ICAO is a liaison organization to TC 97, a more active representation in the structure of TC 97 would, however, be desirable. A lack of familiarity with IEC Standards in aviation circles has been observed.

No competing standards on international level have been identified.

All standards in preparation by TC 97 are genuine new standards. No significant problems with the application of horizontal standards have been identified by TC 97.

**E. TRENDS IN TECHNOLOGY AND IN THE MARKET**

The technologies used in Aeronautical Ground Lighting systems are in a developing and implementing stage. For example, LEDs are commercially available and in the future new and more demanding operational requirements will result in a need for new, sophisticated control and monitoring systems.

The requirement to maintain the aerodrome movement rate under all local weather conditions within a specified visibility minimum whilst maintaining the required level of safety implies the provision of an Advanced Surface Movement Guidance and Control System - A-SMGCS. An advanced visual aids system is a fundamental element of an A-SMGCS. It is expected that new products will evolve from the development of such visual aids systems.

There is a market need for work in the area of safety requirements for aerodrome electrical systems.

In the medium-term view the committee needs to find means to meet the market needs in a more efficient way. More complete preliminary drafts are desirable and a closer co-operation with other TCs should be established. Recruitment of new experts may be needed in particular areas.

**F. SYSTEM APPROACH ASPECTS (REFERENCE - AC/33/2013)**

The focus of TC 97 standards requires a good coordination with some IEC/TCs and with other organizations to minimize conflicts and encourage dialogue among interested parties.

The system approach matrix shows the interdependence of TC 97 with other committees and organizations:

TC 97 as a customer of standards	TC 20	Electric cables
	TC 23	Electrical accessories
	TC 96	Transformers, reactors, power supply units and similar products for low voltages
	TC 99	Rules for system engineering and erection of electrical power installations
	CIE	International Commission on Illumination
TC 97 as supplier of standards	ICAO and ACI	Series circuit systems standards
Other committees which TC 97 should work in collaboration	TC 1	Terminology

**G. CONFORMITY ASSESSMENT**

For the moment, no IEC Conformity Assessment System is being considered in the development of the basis standards for TC 97.

**H. 3-5 YEAR PROJECTED STRATEGIC OBJECTIVES, ACTIONS, TARGET DATES**

STRATEGIC OBJECTIVES 3-5 YEARS	ACTIONS TO SUPPORT THE STRATEGIC OBJECTIVES	TARGET DATE(S) TO COMPLETE THE ACTIONS
Identify and publish the necessary standards covering technical requirements on AGL systems which complement the SARPs of ICAO.	Develop: <ul style="list-style-type: none"> <li>- Project IEC 61820, parts 0, 1 and 2.</li> <li>- NWIP on connecting devices.</li> <li>- Future proposal on in-situ photometric test devices.</li> <li>- Future proposal on PAPI, signs and manhole requirements.</li> </ul>	2021
Review the published standards according to the new technologies taking into account the continuously increasing of the safety demand.	Review published standards:  IEC 61821, IEC 61822, IEC 61823, IEC 61827 and IEC TS 62143.	2019
Reduce the time in developing TC 97 publications.	Increase the efficiency of the meetings by using call conferences, delegating tasks into specific groups, avoiding frequent change of PT conveners, etc.	On going
Seek more expert participation	Promote the activity of TC 97 among specific sector organizations (ACI, IFALPA...).  Participation in sector exhibitions (inter airport...).  TC 97 mirror committees shall encourage the involvement of local stakeholders.	On going

Note: The progress on the actions should be reported in the RSMB.